

### **REMARKS**

In response to the Office Action of October 22, 2003, Applicants have amended the claims, which when considered with the following remarks, is deemed to place the present application in condition for allowance. Favorable consideration of all pending claims is respectfully requested. Amendments of claims have been made in the interest of expediting prosecution of this case. Applicants reserve the right to prosecute the same or similar subject matter in this or another application.

Claims 1, 13-15, 18, 26, 28-30 and 32-54 are now pending in this application. By this Amendment, Claims 28-30 and 51 have been amended in a manner believed to obviate the Examiner's objection to the informalities in the Office Action of October 22, 2003 and Claims 32 and 35 have been amended to further define the invention. Accordingly, withdrawal of the objection is respectfully requested. Claims 38, 43, 48 and 54 have been withdrawn from consideration by the Examiner as being drawn to a non-elected invention. Applicants respectfully submit that no new matter has been added to the subject invention nor have any new issues been raised by this Amendment. Moreover, it is submitted that the claims as now presented place the subject application in condition for immediate allowance.

In the Office Action, the Examiner issued a requirement for restriction categorizing Claims 38, 43, 48 and 54 as being directed to an invention that is independent or distinct from the invention originally claimed "since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits." Applicants respectfully traverse the restriction requirement as being improper and should be withdrawn.

Applicants also respectfully reserve the right to file a divisional application to non-elected Claims 38, 43, 48 and 54 in the event the Examiner's restriction requirement is made final and such claims are canceled from the present application.

Restriction is proper only if the claims are either independent or patentably distinct and the search and examination of the entire application would impose a serious burden on the examiner (MPEP § 803). Applicants respectfully traverse the Restriction Requirement because the Examiner has not provided sufficient reasons to show that such a burden exists. Here, all of applicants' independent Claims 1, 26, 32 and 35 from which non-elected Claims 38, 43, 48 and

54 ultimately depend are directed to a polyurethane per se. Applicants submit that the Examiner, in searching for processes for the production of two-ply paper laminates employing the polyurethane hot melt adhesive of Claims 1, 32 and 35 and the hygiene paper containing the polyurethane hot melt adhesive of Claim 26 would necessarily find art related to polyurethanes which are ionic and nonionic. Thus, no serious burden would be imposed on the Examiner. Accordingly, applicants respectfully request that the Examiner withdraw, or at the very least modify, the requirement for restriction and provide an action on the merits of nonelected Claims 38, 43, 48 and 54.

The Examiner rejected Claims 1, 13-15, 18, 26, 28-30, 32-37, 39-42, 44-47 and 49-53 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Fischer et al. U.S. Patent No. 6,399,735 ("Fischer").

Nowhere does Fischer disclose a process for the production of at least two-ply paper laminates comprising "applying a water-soluble hotmelt adhesive having a solubility in water at 20°C of at least 3% by weight to a first layer of paper, the hotmelt adhesive comprising one or more polyurethanes having a molecular weight ( $M_n$ ) of at least 2,000 and wherein a 0.3% by weight solution of the hotmelt adhesive in water has an upper cloud point of at least 60°C" as presently recited in independent Claim 1. Nor does Fischer disclose a hygiene paper comprising a first layer of paper secured to a second layer of paper by a hotmelt adhesive having a solubility in water at 20°C of at least 3% by weight and comprising one or more polyurethanes having a molecular weight ( $M_n$ ) of at least 2,000, wherein a 0.3% by weight solution of the hotmelt adhesive in water has an upper cloud point of at least 60°C as presently recited in independent Claim 26. Nor does Fischer disclose a process for the production of at least two-ply paper laminates comprising "applying a hotmelt adhesive to at least a portion of a first layer of paper, the hotmelt adhesive comprising a polyurethane obtained from a polyurethane reaction mixture containing a hydrophobic diol having a hydrophobic moiety containing from 6 to 36 carbon atoms and contacting a second layer of paper with the hotmelt adhesive" as presently recited in independent amended Claim 32. Nor does Fischer disclose a process for the production of at least two-ply paper laminates comprising "applying a hotmelt adhesive to at least a portion of a first layer of paper, the hotmelt adhesive comprising a polyurethane obtained from a polyurethane reaction mixture containing a hydrophobic structural element obtained by reacting at least one

NCO-terminated oligomer with a reactant selected from the group consisting of mono-ols and monofunctional amines; and contacting a second layer of paper with the hotmelt adhesive” as presently recited in independent amended Claim 35.

Rather, Fischer discloses water-soluble hot melt adhesives comprising one or more nonionic polyurethanes for bonding paper, wallpaper and labels. At no point does Fischer disclose any processes for producing two-ply paper laminates employing a hotmelt adhesive having a solubility in water at 20°C of at least 3% by weight. Nor, for that matter, is it seen where Fischer discloses hygiene paper a hygiene paper comprising a first layer of paper secured to a second layer of paper by a hotmelt adhesive having a solubility in water at 20°C of at least 3% by weight and comprising one or more polyurethanes having a molecular weight ( $M_n$ ) of at least 2,000, wherein a 0.3% by weight solution of the hotmelt adhesive in water has an upper cloud point of at least 60°C. If it is the Examiner’s position that Fischer discloses the claimed processes for producing two-ply paper laminates; and the claimed hygiene paper, the Examiner is respectfully requested to identify with particularity (i.e., by column and line number) wherein Fischer such disclosure can be found. Accordingly, amended Claims 1, 13-15, 18, 26, 28-30, 32-37, 39-42, 44-47 and 49-53 present novel subject matter relative to Fischer.

There is likewise no disclosure or suggestion in Fischer of the presently claimed processes for the production of two-ply paper or of the claimed hygiene paper. Rather, Fischer is particularly directed to polyurethanes as effective wallpaper adhesives with universal adhesion properties, for placing wallpaper on plastics, such as PVC, or on painted surfaces. Fischer further discloses that its adhesive strength is so high that even heavy wallpapers can be hung without difficulty (see column 6, lines 7-28). Accordingly, nothing in Fischer would lead one skilled in the art to modify the wallpaper adhesives of Fischer to arrive at the presently claimed processes for the production of two-ply papers or, for that matter, to arrive at the presently claimed hygiene paper with any expectation of success. In lacking any disclosure or suggestion of the claimed processes for the production of at least two-ply paper laminates and the claimed hygiene paper, amended Claims 1, 13-15, 18, 26, 28-30, 37, 39-42, 44-47 and 49-53 are believed to be nonobvious, and therefore patentable, over Fischer.

The Examiner has rejected Claims 1, 13-15, 18, 26, 28-30, 37, 39-42, 44-47 and 49-53 under 35 U.S.C. §103(a) as being obvious over the admitted prior art in view of either one of Fischer or Japanese CHEM KK reference JP 54-1347 ("Japanese CHEM KK").

As pointed out by the Examiner in the Office Action, nowhere does the admitted prior art disclose or suggest a process for the production of at least two-ply paper laminates comprising "applying a water-soluble hotmelt adhesive having a solubility in water at 20°C of at least 3% by weight to a first layer of paper, the hotmelt adhesive comprising one or more polyurethanes having a molecular weight ( $M_n$ ) of at least 2,000 and wherein a 0.3% by weight solution of the hotmelt adhesive in water has an upper cloud point of at least 60°C" as presently recited in independent Claim 1. Nor does the admitted prior art disclose or suggest a hygiene paper comprising a first layer of paper secured to a second layer of paper by a hotmelt adhesive having a solubility in water at 20°C of at least 3% by weight and comprising one or more polyurethanes having a molecular weight ( $M_n$ ) of at least 2,000, wherein a 0.3% by weight solution of the hotmelt adhesive in water has an upper cloud point of at least 60°C as presently recited in independent Claim 26. Nor does the admitted prior art disclose or suggest a process for the production of at least two-ply paper laminates comprising "applying a hotmelt adhesive to at least a portion of a first layer of paper, the hotmelt adhesive comprising a polyurethane obtained from a polyurethane reaction mixture containing a hydrophobic diol having a hydrophobic moiety containing from 6 to 36 carbon atoms and contacting a second layer of paper with the hotmelt adhesive" as presently recited in independent amended Claim 32. Nor does the admitted prior art disclose or suggest a process for the production of at least two-ply paper laminates comprising "applying a hotmelt adhesive to at least a portion of a first layer of paper, the hotmelt adhesive comprising a polyurethane obtained from a polyurethane reaction mixture containing a hydrophobic structural element obtained by reacting at least one NCO-terminated oligomer with a reactant selected from the group consisting of mono-ols and monofunctional amines; and contacting a second layer of paper with the hotmelt adhesive" as presently recited in independent amended Claim 35.

Rather, the admitted prior art discloses that the disadvantage of bonding together hygiene papers using a water-soluble adhesive. The admitted prior art further discloses that while it is

advantageous and desirable for the adhesive to be completely water-soluble, the admitted prior art is silent as to a particular adhesive that is completely water-soluble.

To remedy the deficiencies of the admitted prior art, the Examiner alleges that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the water soluble adhesive taught by the admitted prior art any of the well known and conventional adhesives in the art that are completely water soluble such as those suggested by either one of Fischer et al. or Chem KK as only the expected results would be achieved”. This wholly unsupported allegation cannot possibly serve as a basis for this rejection. The admitted prior art in the application simply discloses the disadvantages of water soluble adhesives. Besides, it is well established that there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. *In re Lee*, 277 F.3d 1338, 1342-43, 61 USPQ2d 1430, 1433-34 (CAFC 2002). Accordingly, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 221 USPQ 929, 933 (Fed. Cir. 1984).

Fischer does not cure the deficiencies of the admitted prior art. Rather, Fischer is directed to polyurethanes as effective wallpaper adhesives with universal adhesion properties, for placing wallpaper on plastics, such as PVC, or on painted surfaces. At no point does Fischer have any appreciation that the water-soluble hotmelt adhesives as set forth in the present claims would be useful in processes for forming two-ply paper laminates or in forming hygiene papers. In fact, Fischer discloses that the adhesive strength of the adhesive disclosed therein is so high that even heavy wallpapers can be hung without difficulty (see column 6, lines 7-28). As such, nothing in Fischer would lead one skilled in the art to modify the hygiene papers disclosed in the admitted prior art by looking to the wallpaper adhesives of Fischer to arrive at the presently claimed processes for the production of two-ply papers or, for that matter, to arrive at the presently claimed hygiene paper with any expectation of success.

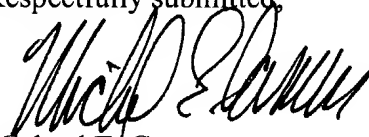
Japanese CHEM KK likewise does not cure the deficiencies of the admitted prior art. Rather, Japanese CHEM KK discloses that a water soluble polyurethane resin can be used in thermally bonding a *hot-melt adhesive cloth to cloth* without hardening the texture of the sewn finished product. The final product is used as, for example, a collar or a cuff in a shirt.

Applicants instead form (1) two-ply paper laminates in the recited processes of the present invention, as set forth in amended Claims 1, 32 and 35 and (2) hygiene paper, as set forth in Claim 26. Accordingly, one skilled in the art would not look to the disclosure of Japanese CHEM KK for adhesives used in bonding *cloth to cloth* to modify the admitted prior art and arrive at the claimed processes for the production of two-ply paper and the claimed hygiene paper.

For the foregoing reasons, amended Claims 1, 13-15, 18, 26, 28-30, 37, 39-42, 44-47 and 49-53 are believed to nonobvious, and therefore patentable, over the admitted prior art in view of Fischer or Japanese CHEM KK, no matter how these references are considered or combined. Thus, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

For the foregoing reasons, amended Claims 1, 13-15, 18, 26, 28-30, 32-37, 39-42, 44-47 and 49-53 as presented herein are believed to be in condition for immediate allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,



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